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EXAMINER
LAZARO, DAVID R

ART UNIT	PAPER NUMBER
2155	3

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 January 2002_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _15 August 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _2_ .	6) ☐ Other: .

DETAILED ACTION

Claims 1-24 are pending in this office action.

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on 1/18/02 has been considered by the examiner.

Specification

2.   The use of the trademarks Infiniband has been noted in this application (See page 11 line 19). It should be capitalized wherever it appears and be accompanied by the generic terminology.

The use of the trademarks RapidIO has been noted in this application (See page 11 line 19). It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

3.   Claim 13 is objected to because of the following informalities: In line 14, "at least of portion" should be "at least a portion". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6.   Claim 18 recites the limitation "the intelligent server". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8.   Claims 1, 2, 7, 11 and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent 5,978,577 by Rierden et al. (Rierden).

9.   With respect to Claim 1, Rierden teaches a distributed multiprocessor server system for facilitating delegated processing of at least portions of request associated with request message received via a communicatively couple network link (Col. 4 lines 15-16), the system comprising a network interface (Col. 4 lines 63-65), an intelligent switch couple to the network interface (Col. 9 lines 31-34), the switch comprising logic components for identifying a new request, corresponding to a message packet received

by the network interface, passed from the network interface to the intelligent switch (Col. 9 lines 31-34), a default handler processor coupled to the intelligent switch (Col. 17 lines 4-5) and configured to receive the new request from the intelligent switch, the default handler processor comprising delegation logic facilitating: associating a request type with at least a portion of the new request(Col. 17 lines 19-21), identifying a handler processor from a set of specialized handler processors for executing at least the portion of the new request based upon the request type (Col. 17 lines 6-8), and issuing a message reassigning at least the portion of the new request to the identified handler processor (Col. 17 lines 6-24 and 43-49), and at least one bus structure communicatively linking the set of specialized handler processors to the intelligent switch and request reassignment tracking logic enabling the intelligent switch to route message associated with at least the portion of the reassigned request between the identified processor and the network interface, thereby facilitating completing at least the portion of the new request through communications between the identified handler of specialized handler processors and the network interface via the intelligent switch without intervention by the default handler processor (Col. 17 lines 16-24 and 43-49).

10.   With respect to Claim 2, Rierden teaches all the limitations of Claim 1 and further teaches a storage server system is linked to the intelligent switch (Col. 4 line 65 to Col. 5 line 5) via a non-blocking switch (Col. 9 lines 31-34).

11.   With respect to Claim 7, Rierden teaches all the limitations of Claim 2 and further teaches the set of specialized handler processors includes a processor facilitating transfer of a file stored on the storage server system (Col. 9 lines 13-25).

12.   With respect to Claim 9, Rierden teaches all the limitations of Claim 2 and further

teaches the set of specialized handler processors includes a processor including

functionality facilitating transforming the data within a file prior to a transfer (Col. 8 lines

5-12).

13.   With respect to Claim 11, Rierden teaches all the limitations of Claim 1 and

further teaches a data retrieval buffer interposed between a data storage facility and the

set of specialized handler processors, the data retrieval buffer being independently

accessible with respect to a primary RAM utilized by the default handler processor (Col.

5 lines 2-5).

14.   With respect to Claim 12, Rierden teaches all the limitations of Claim 1 and

further teaches new/old request differentiation logic enabling the server system to

identify and respond to new connection requests at a different level of priority than a

priority assigned to requests associated with existing connections (Col. 9 lines 26-31).

15.   With respect to Claim 13, Rierden teaches a method for allocating received

requests in a multiprocessor network server including a network interface, an intelligent

switch (Col. 9 lines 31-34), a default handler processor (Col. 17 lines 4-5), and a set of

specialized handler processors (Col. 17 lines 7-8), the method comprising the steps of

receiving, by the network interface, a message packet including a request (Col. 8 lines

62-65), passing at least the request to the intelligent switch (Col. 8 lines 65-67),

determining the request is a new request, and in response performing the further steps

of identifying by the default handler processor, based upon a request type of the new

request, a handler processor from the set of specialized handler processors that is

capable of executing at least a portion of the new request (Col. 17 lines 6-24 and 43-49)

and reassigning by the default handler processor, the new request to the identified

handler processor to perform at least a portion of the new request (Col. 17 lines 16-24

and 43-49) wherein the intelligent switch creates a table entry identifying the request

and the identified handler processor to which at least a portion of the new request is

reassigned (Col. 15 lines 27-39), and executing, by the identified handler processor, at

least the portion of the new request wherein during executing step the identified handler

processor communicates with the network interface via the intelligent switch, thereby

bypassing the default handler processor while executing at least the portion of the new

request (Col. 17 line 16-24 and 43-49).

16.   With respect to Claim 14, Rierden teaches all the limitations of Claim 13 and

further teaches a storage server system is linked to the intelligent switch (Col. 4 line 65

to Col. 5 line 5) via a non-blocking switch (Col. 9 lines 31-34), and the executing step

comprises transferring data from the storage server to the network interface (Col. 17

lines 46-49).

17.   With respect to Claim 19, Rierden teaches all the limitations of Claim 14 and

further teaches within the set of specialized handler processors, a processor facilitating

transfer of a file stored on the storage server system (Col. 9 lines 13-25).

18.   With respect to Claim 21, Rierden teaches all the limitations of Claim 14 and

further teaches within the set of specialized handler processors, a processor including

functionality facilitating transforming the data within a file prior to transfer (Col. 8 lines 5-

12).

19.   With respect to Claim 24, Rierden teaches all the limitations of Claim 13 and

further teaches storing data retrieved from a data storage facility in a data retrieval

buffer interposed between a data storage facility and the set of specialized handler

processors, the data retrieval buffer being independently accessible with respect to a

primary RAM utilized by the default handler processor (Col. 5 lines 2-5).

20.   With respect to Claim 25, Rierden teaches all the limitations of Claim 13 and

further teaches differentiating a new connection request from a request associated with

an existing connection, thereby facilitating assigning a first priority to the request

associated with the existing connection and a second priority to the new connection

request (Col. 9 lines 26-31).

Claim Rejections - 35 USC § 103

21.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

22.   Claims 3 and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over

Rierden in view of U.S. Patent 6,425,059 by Basham et al. (Basham).

23.   With respect to Claim 3, Rierden teaches all the limitations of Claim 2 but does

not explicitly disclose the storage server system having memory arranged as a set of

version controlled partitions. However it is well known in the art that memory can be

arranged into a set of version controlled partitions as shown by Basham (Col. 4 lines 39-

42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Rierden and modify it as indicated by Basham with the storage server system comprising memory arranged as a set of version controlled partitions. One would be motivated to have this as it allows one to share data among multiple users without destroying the integrity of the data (Col. 1 lines 33-36).

24. With respect to Claim 15, Rierden teaches all the limitations of Claim 14 but does not explicitly disclose arranging stored content within the system as a set of version controlled partitions. However it is well known in the art that memory that can store content can be arranged into a set of version controlled partitions as shown by Basham (Col. 4 lines 39-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rierden and modify it as indicated by Basham with the step of arranging stored content within the storage server system as a set of version controlled partitions. One would be motivated to have this as it allows one to share data among multiple users without destroying the integrity of the data (Col. 1 lines 33-36).

25. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rierden in view of Basham as applied to claims 3 and 15 above, and further in view of U.S. Patent 5,546,558 by Jacobson et al. (Jacobson).

26. With respect to Claim 4, Rierden in view of Basham teaches all the limitations of Claim 3 but does not explicitly disclose incorporating a straddle into a partition.

However, it is well known in the art that a straddle can be incorporated into a partition to facilitate continuous availability of stored data as shown by Jacobson (Col. 8 lines 30-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the system disclosed by Rierden and modify it as indicated by Jacobson wherein a straddle is incorporated into a partition, thereby facilitating continuous availability of all stored data while a particular partition is relocated within the storage server system. One would be motivated to have this as it is desired to have continuous data availability in a storage system (Col. 1 lines 30-40 of Jacobson).

27.   With respect to Claim 16, Rierden in view of Basham teaches all the limitations of Claim 15 but does not explicitly disclose incorporating a straddle into a partition. However, it is well known in the art that a straddle can be incorporated into a partition to facilitate continuous availability of stored data as shown by Jacobson (Col. 8 lines 30-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rierden and modify it as indicated by Jacobson wherein a straddle is incorporated into a partition, thereby facilitating continuous availability of all stored data while a particular partition is relocated within the storage server system. One would be motivated to have this as it is desired to have continuous data availability in a storage system (Col. 1 lines 30-40 of Jacobson).

28.   Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rierden in view of U.S. Patent 6,484,186 by Rungta (Rungta).

29.   With respect to Claim 5, Rierden teaches all the limitations of Claim 2 but does

not explicitly disclose using a bitmap entry to represent a state of a file maintained by

the storage server system. However it is well known in the art that the state of a file

maintained in a system can be represented in the form of a bitmap entry as shown by

Rungta (Col 1 lines 42-54). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to take the system disclosed by Rierden and modify

it as indicated by Rungta with a state of a file maintained by the storage server system

is represented in the form of a bitmap entry and wherein a first bit is associated with a

creator of new data in the file and a second bit is associated with a deleter of data

stored in the file. One would be motivated to have this as it allows for internal file

consistency which needs to be maintained in a system (Col. 1 lines 25-26).

30.   With respect to Claim 17, Rierden teaches all the limitations of Claim 14 but does

not explicitly disclose using a bitmap entry to represent a state of a file maintained by

the storage server system. However it is well known in the art that the state of a file

maintained in a system can be represented in the form of a bitmap entry as shown by

Rungta (Col 1 lines 42-54). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to take the method disclosed by Rierden and modify

it as indicated by Rungta with the storage server system maintaining a state of a file in

the form of a bitmap entry and wherein a first bit is associated with a creator of new data

in the file and a second bit is associated with a deleter of data stored in the file. One

would be motivated to have this as it allows for internal file consistency that needs to be

maintained in a system (Col. 1 lines 25-26).

31.   Claims 6, 8, 10, 18, 20 and 22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rierden in view of U.S. Patent 6,374,296 by Lim et al. (Lim).

32.   With respect to Claim 6, Rierden teaches all the limitations of Claim 2 but does

not explicitly disclose the use of ATM cells being sent from the non-blocking switch.

However it is well known in the art that ATM can be used for transfer of data as shown

by Lim (Col. 6 lines 1-5). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to take the system disclosed by Rierden and modify it

as indicated by Lim with the intelligent switch receiving messages from the non-blocking

switch in the form of ATM cells. One would be motivated to have this since it is desired

in implementing networks to use Industry standards such as ATM, Ethernet, and TCP

(Col. 5 line 65 to Col. 6 line 11).

33.   With respect to Claim 8, Rierden teaches all the limitations of Claim 7 but does

not explicitly teach the file transfer is in accordance with a TCP named file transfer

protocol. However, it is well known in the art that files can be transferred using a TCP

named file transfer protocol as found in the standard ISO protocol suite as shown by

Lim (Col. 6 lines 6-11). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to take the system disclosed by Rierden and modify it

as indicated by Lim wherein the file transfer is performed in accordance with a TCP

named file transfer protocol over an identified connection. One would be motivated to

have this since it is desired in implementing networks to use Industry standards such as

ATM, Ethernet, and TCP (Col. 5 line 65 to Col. 6 line 11).

34.   With respect to Claim 10, Rierden teaches all the limitations of Claim 1 but does

not explicitly teach the set of specialized handler processors includes a processor

including computer gateway interface (CGI) functionality. However it is well known in

the art that one can include CGI functionality in a specialized handler that will process a

user request as shown by Lim (Col. 9 lines 10-12).). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to take the system

disclosed by Rierden and modify it as indicated by Lim wherein the set of specialized

handler processors includes a processor including computer gateway interface (CGI)

functionality. One would be motivated to have this since CGI functionality is common in

the web server environment and aids in determining and dynamically processing a

user's request (Col. 8 line 67 to Col. 9 line 9).

35.   With respect to Claim 18, Rierden teaches all the limitations of Claim 14 but does

not explicitly disclose the use of ATM cells being sent from the non-blocking switch.

However it is well known in the art that ATM can be used for transfer of data as shown

by Lim (Col. 6 lines 1-5). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to take the method disclosed by Rierden and modify it

as indicated by Lim with receiving, by the intelligent server, a message from the non-

blocking switch in the form of ATM cells. One would be motivated to have this since it is

desired in implementing networks to use Industry standards such as ATM, Ethernet,

and TCP (Col. 5 line 65 to Col. 6 line 11).

36.   With respect to Claim 20, Rierden teaches all the limitations of Claim 19 but does not explicitly teach the file transfer is in accordance with a TCP named file transfer protocol. However, it is well known in the art that files can be transferred using a TCP named file transfer protocol as found in the standard ISO protocol suite as shown by Lim (Col. 6 lines 6-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rierden and modify it as indicated by Lim wherein the processor facilitating transfer of a file operates in accordance with a TCP named file transfer protocol over an identified connection. One would be motivated to have this since it is desired in implementing networks to use Industry standards such as ATM, Ethernet, and TCP (Col. 5 line 65 to Col. 6 line 11).

37.   With respect to Claim 22, Rierden teaches all the limitations of Claim 13 but does not explicitly teach the set of specialized handler processors includes a processor including computer gateway interface (CGI) functionality. However it is well known in the art that one can include CGI functionality in a specialized handler that will process a user request as shown by Lim (Col. 9 lines 10-12).). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Rierden and modify it as indicated by Lim providing, within the set of specialized handler processors, a processor including computer gateway interface (CGI) functionality. One would be motivated to have this since CGI functionality is common in the web server environment and aids in determining and dynamically processing a user's request (Col. 8 line 67 to Col. 9 line 9).

Conclusion

38.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

39.   U.S. Patent 6,615,231 by Deen et al. "System and Method for Directing Requests

to Specific Processing" September 2, 2003

40.   U.S. Patent 6,539,494 by Abramson et al. "Internet Server Session Backup

Apparatus" March 25, 2003

41.   U.S. Patent 6,304,967 by Braddy "System and Architecture for Distributing,

Monitoring, and Managing Information Requests on a Computer Network" October 16,

2001

42.   U.S. Patent 6,223,205 by Harchol-Balter et al. "Method and Apparatus for

Assigning Tasks in a Distributed Server System" April 24, 2001

43.   U.S. Patent 5,867,706 by Martin et al. "Method of Load Balancing Across the

Processors of a Server" February 2, 1999

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David Lazaro whose telephone number is 703-305-

4868. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam can be reached on 703-308-6662. The fax phone number for

the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-305-

3900.

David Lazaro
November 7, 2003

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER